

DEC 13 2004

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Please deliver the following page(s) to:

Name: U.S. Patent and Trademark Office
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Our Client No.: 5107-4
Your Ref.: Serial No. 10/650,011 filed August 26, 2003

Total Number of Pages, including this cover page: 10

Sender's Name: Douglas W. Swartz

MESSAGE:

Please see the attached Supplemental Information Disclosure Statement, Form PTO-1449, and copies of the cited non-patent references (2 references) to be filed in connection with the above-referenced patent application.

PLEASE CONFIRM RECEIPT

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DEC 13 2004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:

Group Art Unit: 3617

DONNELLY et al.

Examiner: ROBERT J. McCARRY, JR.

Serial No.: 10/650,011

Filed: August 26, 2003

Atty. File No.: 5107-4

For: "METHOD FOR MONITORING AND
CONTROLLING LOCOMOTIVES"SUPPLEMENTAL
INFORMATION DISCLOSURE STATEMENT

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Dear Sir:

The references cited on attached Form PTO-1449 are being called to the attention of the Examiner.

☒ Copies of the cited non-patent, non-published patent application, and/or foreign references are enclosed herewith☐ Copies of the cited U.S. patents/patent application publications are not enclosed in accordance with the waiver dated July 11, 2003, whereby patent applications filed after June 30, 2003 and international applications that have entered the national stage under 35 U.S.C. § 371 after June 30, 2003 need not submit copies of U.S. patents and U.S. patent application publications.☐ Copies of the cited references are not enclosed, in accordance with 37 C.F.R. 1.98(d), because the references were cited by or submitted to the U.S. Patent and Trademark Office in prior application Serial No. _____ filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120.☐ To the best of applicants' belief, the pertinence of the foreign-language references are believed to be summarized in the attached English abstracts and in the figures, although applicants do not necessarily vouch for the accuracy of the translation.☐ Examiner's attention is drawn to the following co-pending applications, copies of which have been or are being submitted:

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Submission of the above information is not intended as an admission that any item is citable under the

statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

FEEs

<input type="checkbox"/>	<p>37 CFR 1.97(b): No fee is believed due in connection with this submission, because the information disclosure statement submitted herewith satisfies one of the following conditions ("X" indicates satisfaction):</p> <p><input type="checkbox"/> Within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d), or</p> <p><input type="checkbox"/> Within three months of the date of entry into the national stage of an international application as set forth in 37 CFR 1.491 or</p> <p><input type="checkbox"/> Before the mailing date of a first Office Action on the merits, or</p> <p><input type="checkbox"/> Before the mailing of a first Office action after the filing of a request for continued examination under 37 CFR 1.114.</p> <p>Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970.</p>
<input checked="" type="checkbox"/>	<p>37 CFR 1.97(c): The information disclosure statement transmitted herewith is being filed after all the above conditions (37 CFR 1.97(b)), but before the mailing date of one of the following conditions:</p> <p>(1) a final action under 37 C.F.R. 1.113 or</p> <p>(2) a notice of allowance under 37 C.F.R. 1.311, or</p> <p>(3) an action that otherwise closes prosecution in the application.</p> <p>This Information Disclosure Statement is accompanied by:</p> <p><input type="checkbox"/> A Certification (below) as specified by 37 C.F.R. 1.97(e). Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970.</p> <p style="text-align: center;">OR</p> <p><input checked="" type="checkbox"/> Please charge Deposit Account 19-1970 in the amount of \$180.00 for the fee set forth in 37 C.F.R. 1.17(p) for submission of an information disclosure statement. Please credit any overpayment or charge any underpayment to Deposit Account 19-1970.</p>
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Certification (37 C.F.R. 1.97(e))
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☐ The undersigned certifies that:

☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1).

☐ A copy of the communication from the foreign patent office is enclosed.

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☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(2).

Respectfully submitted,

SHERIDAN ROSS P.C.

By: 

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Date: Dec 13, 2004

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	10/650,011
				Filing Date	August 26, 2003
				First Named Inventor	Frank Wegner Donnelly
				Art Unit	3617
Examiner Name	Robert J. McCarry, Jr.				
Sheet	1	of	2	Attorney Docket Number	5107-4

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1.	US-3,728,596	04-1973	Hermansson et al.	
	2.	US-3,737,745	06-1973	Chevaugeon et al.	
	3.	US-3,930,189	12-1975	Smith	
	4.	US-3,997,822	12-1976	Logston et al.	
	5.	US-4,152,758	05-1979	Bailey et al.	
	6.	US-5,480,220	01-1996	Kumar	
	7.	US-6,104,148	08-2000	Kumar et al.	
	8.	US-6,367,891	04-2002	Smith et al.	
	9.	US-6,634,303	10-2003	Madsen et al.	
	10.	US-6,812,656	11-02-2004	Donnelly et al.	

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T*
		Country Code ²	Number ³ ; Kind Code ³ (if known)				
		-					
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OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)		
Examiner Initials*	Cite No. ¹	
	11.	Band, C.E. et al., "Development of and Operational Experience with a High Powered D.C. Chopper for 1500 Volt D.C. Railway Equipment," Institution of Electrical Engineers Conference Publication 53 on Power Thyristors and Their Applications, Part 1 (May 1969), pp. 277-288.
Examiner Signature		Date Considered

*EXAMINER: Initial if reference is considered, whether or not citation is in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	10/650,011
				Filing Date	August 26, 2003
				First Named Inventor	Frank Wegner Donnelly
				Art Unit	3817
				Examiner Name	Robert J. McCarry, Jr.
Sheet	2	of	2	Attorney Docket Number	5107-4
	12.	Declaration of Ronald Balley under 37 CFR § 1.98 dated Dec. 3, 2004 for U.S. Application Serial No. 10/650,011, 3 pages.			

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference is considered, whether or not citation is in conformance and not considered. Include copy of this form with next communication to applicant.

Development of and Operational Experience with a High Powered D.C. Chopper for 1500 Volt D.C. Railway Equipment

C.E. Band and J.H. Stephens

Introduction. In order to progress beyond the 600/1000 Volt D.C. traction systems, for which chopper techniques were established, a 1500 volt equipment was built in 1967 and has been in regular service since July 1968. The equipment was based on operational experience obtained with 600 volt chopper on London Transport Board's fourth rail system, and was supplied to N.R. for installation in one of their motor coaches.

Power Circuits. The power circuit is arranged to have a separate chopper network for each permanently coupled series pairs of motors, with the two networks linked to the 1,000 volt overhead supply via a common filter choke and capacitor (Fig. 1). The traction system experiences transient voltages of up to 6kV, which are reduced to a more acceptable level by means of a spark gap/metrosil network set to spark over at 3700 volt D.C. This enables the following power networks to be employed:-

- T1 - 2 parallel strings, each string 6 series 800 volt inverter grade thyristors
- T2 - 1 parallel string, each string 4 series 1100 volt limited turn off thyristors
- D1 - 2 parallel strings, each string 2 series 2200 volt diodes
- D2 - 1 parallel string, each string 3 series 2200 volt diodes
- D3 - 2 parallel strings, each string 4 series 2200 volt diodes

Each device is mounted on a separate heat sink and natural cooling is used throughout.

In order to reduce the size of the filter capacitor and to double the frequency of the line ripple current, the chopper networks are arranged to pulse alternately, each one covering the range 100 Hz to 400 Hz. During motoring cut-out conditions, the minimum frequency is raised to 130 Hz in order to keep the ripple frequency well above the safety signaling frequencies of 50 Hz and 75 Hz.

Band and Stephens are with A.E.I. Traction, Ltd.

Institution of Electrical Engineers Conference Publication 53 on Power Thyristors and Their Applications, Part 1, pp. 277-288, May 1969